

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

ORDER NO. 91-159  
NPDES NO. CA0029025

RENEWAL OF WASTE DISCHARGE REQUIREMENTS FOR:

SEAGATE TECHNOLOGY, INC.  
3333 SCOTT BOULEVARD  
CITY OF SANTA CLARA, SANTA CLARA COUNTY

(FORMERLY THE MAGNETIC  
PERIPHERALS, INC. SITE)

The California Regional Water Quality Control Board, San Francisco Bay Region (hereinafter called the Board), finds that:

1. Seagate Technology, Inc., hereinafter called the discharger, submitted an NPDES permit application (Report of Waste Discharge) in September of 1991 for reissuance of NPDES Permit No. CA0029025 for the site at 3333 Scott Boulevard in Santa Clara.
2. The discharge of wastewater from the site currently is regulated by Waste Discharge Requirements, Order No. 86-85, adopted by the Board on November 19, 1985 and issued to Magnetic Peripherals, Inc. (MPI). Seagate Technology, Inc. acquired Magnetic Peripherals, Inc. in September of 1989.
3. The site, once used for the assembly of computer products, has been dormant since 1986. The site was developed from agricultural land and occupied by Sperry Corporation (Sperry) from August 1978 to April 1983, at which time MPI, then a division of Control Data Corporation, occupied the site and took over operations from Sperry. Subsequently Sperry became part of Unisys Corporation (UNISYS).
4. Groundwater beneath the site has been polluted by volatile organic chemicals (VOCs) such as TCE, 1,1,1-TCA, trans/cis-1,2-DCE, 1,1-DCA, Freon 113, Freon 11, and others. In August of 1986 a groundwater extraction and treatment system was installed by MPI and UNISYS. Unisys Corporation and Magnetic Peripherals, Inc. (now part of Seagate Technology) are named as dischargers in the Site Cleanup Requirements Order for this site; UNISYS and Seagate/MPI are currently cooperating to implement Waste Discharge Requirements of the NPDES permit.
5. Polluted groundwater was extracted for treatment by a packed tower air stripper and a carbon adsorption unit, prior to discharge to a storm sewer system tributary to Calabazas Creek

and South San Francisco Bay. The discharge is authorized by the existing NPDES permit. The carbon vessel has been removed from the treatment circuit but is available if needed.

6. MPI and UNISYS originally installed seven groundwater extraction wells, in three clusters, and 13 onsite monitoring wells; additional monitoring wells were installed in 1990. Following discussions between UNISYS, Seagate/MPI and Board staff, a number of monitoring and extraction wells were properly plugged and abandoned in 1991; one each monitoring and extraction well were replaced with new wells. Figure 1 is a site map showing the locations of existing wells.
7. A new extraction protocol, proposed by MPI/Seagate and UNISYS and accepted by the Board, resulted in a significant reduction in the volume of extracted groundwater. Figure 2 is the current groundwater extraction (and monitoring) protocol.
8. Influent from extraction well(s) is piped to the treatment unit outside the northwest corner of the existing (vacant) onsite building and discharged into a large open-top tank where it is mixed with acid for scale control before advancing to the air stripper.
9. Approximately 14,400 gallons per day (gpd) are extracted, treated and discharged at present. The treatment system has been in operation from August 18, 1986. Before the new extraction protocol was implemented, about 75,000 gpd were being discharged. The effluent has historically contained minor amounts of Freon 113, TCE, and trans/cis-1,1-DCE. The most recent (06/18/91) chemical analysis of the effluent shows ND (at 0.5 ppb detection limit) for all halocarbons (VOCs of interest). The groundwater tested was from only one extraction well and did contain Trichloroethene (TCE at 4.4 ppb), cis-1,2-Dichloroethene (cis-1,2-DCE at 42 ppb), and 1,1,2-Trichlorotrifluorethane (Freon 113 at 150 ppb) in the influent.
10. The Board adopted a revised Water Quality Control Plan for the San Francisco Bay Region (Basin Plan) on December 17, 1986. The Basin Plan contains water quality objectives and beneficial uses for South San Francisco Bay and contiguous surface waters, and groundwater.
11. The beneficial uses of water in the South San Francisco Bay include:
  - \* Contact and non-contact water recreation
  - \* Wildlife habitat
  - \* Preservation of rare and endangered species
  - \* Estuarine habitat
  - \* Fish spawning and migration

- \* Shellfish harvesting
  - \* Ocean commercial and sport fishing
  - \* Navigation
  - \* Industrial service supply
12. The beneficial uses of water in Calabazas Creek include:
- \* Agricultural supply
  - \* Groundwater recharge
  - \* Contact and non-contact water recreation
  - \* Warm fresh water and cold fresh water habitat
  - \* Wildlife habitat
  - \* Navigation
13. The groundwater recharge use of Calabazas Creek will continue to be protected because the effluent limits prescribed by this Order are those which have been established as being protective of groundwater recharge areas.
14. The Basin Plan prohibits discharges of wastewater which has particular characteristics of concern to beneficial uses (a) at any point in San Francisco Bay south of the Dumbarton Bridge and (b) at any point where the wastewater does not receive a minimum initial dilution of at least 10:1 or into any nontidal water, deadend slough, similar confined water, or any immediate tributary thereof.
15. The Basin Plan allows for exceptions to the prohibitions referred to in Finding 14 above when it can be demonstrated that a net environmental benefit can be derived as a result of the discharge.
16. Exceptions to the prohibitions referred to are warranted because the discharge is an integral part of a program to clean up polluted groundwater and thereby produces a net environmental benefit, and because receiving water concentrations are expected to be below levels that would affect beneficial uses.
17. The Basin Plan prohibits discharges of all conservative toxic and deleterious substances, above those levels which can be achieved by a program acceptable to the Board, to waters of the Basin. The groundwater extraction and treatment system and associated operation, maintenance, and monitoring plan constitutes a presently acceptable control program for minimizing the discharge of toxicants to waters of the State.
18. The State Water Resources Control Board and this Regional Board have adopted policies which favor reclamation and reuse of extracted groundwater whenever feasible. This Board favors adopting an NPDES permit which authorizes the discharge of extracted groundwater only where reclamation, reuse, and

discharge to a POTW are neither technologically nor economically feasible.

Seagate Technology/MPI, in cooperation with UNISYS, will evaluate the disposal of extracted groundwater periodically and will report on the feasibility of reclamation or reuse of this water at least once each year. This report may be included with the annual report for the site.

19. Effluent limitations of this Order are based on the Basin Plan, State and U.S. Environmental Protection Agency (EPA) Plans and Policies, and best technical judgement. Also considered in the determination of effluent limits were the EPA Region IX draft guidance "NPDES Permit Limitations for Discharge of Contaminated Groundwater: Guidance Document", and the San Francisco Bay Regional Water Quality Control Board Internal Memorandum dated February 16, 1990, "Proposed NPDES Permit Limits For Common Organic Pollutants Found at Service Stations and Other Groundwater Clean Up Sites".
20. The issuance of waste discharge requirements for this discharge is exempt from the provisions of Chapter 3 (commencing with Section 21100) of Division 13 of the Public Resources Code (CEQA) pursuant to Section 13389 of the California Water Code,
21. The Board has notified Seagate Technology/MPI and UNISYS and interested agencies and persons of its intent to issue an Order for the discharge (renewal) and has provided them with an opportunity for a public hearing and an opportunity to submit written views and recommendations.
22. The Board, in a public meeting, heard and considered all comments pertaining to the discharge.

IT IS HEREBY ORDERED that the discharger, in order to meet the provisions contained in Division 7 of the California Water Code and regulations adopted thereunder, and the provisions of the Clean Water Act and regulations and guidelines adopted thereunder, shall comply with the following:

A. EFFLUENT LIMITATIONS

1. The discharge of all conservative toxic and deleterious substances above those levels which can be achieved by a program acceptable to the Board, is prohibited.
2. The discharge of waste containing constituents in excess of the following limits is prohibited:

<u>Constituent</u>	<u>Instantaneous Maximum (ug/l)</u>
Trichloroethylene	5
1,1-Dichloroethylene	5
trans-1,2-Dichloroethylene	5
cis-1,2-Dichloroethylene	5
1,1-Dichloroethane	5
1,1,2-Trichlorotrifluoroethane (Freon 113)	5
Trichlorofluoromethane (Freon 11)	5
1,1,1-Trichloroethane	5
Tetrachloroethylene	5
Chloroform	5
Methylene chloride	5
1,2-Dichloroethane	0.5
Vinyl Chloride	0.5
Carbon tetrachloride	0.5
Total concentration of all volatile organic chemicals (VOCs)	5

3. The pH of the discharge shall not exceed 8.5 nor be less than 6.5 units.
4. In any representative set of samples, the discharge of waste shall meet the following limit of quality:

**TOXICITY:**

Compliance bioassays shall be performed using two test fish species in parallel tests. One shall be three-spine stickleback, and the other shall be either rainbow trout or fathead minnow. The survival of test fishes in 96-hour bioassays of the effluent as discharged shall be a median of 90 percent survival and a 90 percentile value of not less than 70 percent survival. The flow-through effluent bioassay is the preferred methodology for this test.

5. The discharge of waste shall meet effluent limitations for selected toxic pollutants including metals, for discharge to surface waters, of Table IV-1 of the Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) currently in effect.

**B. RECEIVING WATER LIMITATIONS**

1. The discharge of wastes shall not cause the following conditions to exist in waters of the State at any place at levels that cause nuisance or adversely affect beneficial uses:

- a. Floating, suspended, or deposited macroscopic particulate matter or foam;
  - b. Bottom deposits or aquatic growths;
  - c. Alteration of temperature, turbidity, or apparent color beyond present natural background levels;
  - d. Visible, floating, suspended, or deposited oil or other products of petroleum origin;
  - e. Toxic or other deleterious substances to be present in concentrations or quantities which will cause deleterious effects on aquatic biota, wildlife, or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentration.
2. The discharge of waste shall not cause the following limits to be exceeded in waters of the State in any place within one foot of the water surface:
- a. Dissolved oxygen: 5.0 mg/l minimum. The median dissolved oxygen concentration for any three consecutive months shall not be less than 80% of the dissolved oxygen content at saturation.
  - b. pH: The pH shall not be depressed below 6.5 nor raised above 8.5, nor caused to vary from normal ambient pH levels by more than 0.5 units.
  - c. Un-ionized ammonia (as N) 0.025 mg/l annual mean  
0.4 mg/l maximum at any time
3. Neither the treatment nor the discharge of waste shall create pollution, contamination, or nuisance, as defined by Section 13050 of the California Water Code.
4. The discharger shall not cause a violation of any applicable water quality objective of the Basin Plan most recently adopted for this Region.
5. The discharger shall not cause a violation of any applicable water quality standard for receiving waters adopted by the Board or the State Water Resources Control Board as required by the Federal Water Pollution Control

Act and regulations adpted thereunder. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Board will revise and modify this Order in accordance with such more stringent standards.


C. PROVISIONS

1. The discharger shall comply with all sections of this Order immediately upon adoption by the Board.
2. The discharger shall comply with the Self-Monitoring Program as adopted by the Board and as may be amended by the Executive Officer.
3. This Order includes all items of the attached "Standard Provisions, Reporting Requirements and Definitions" dated December 1986.
4. This Order authorizes the discharge of treated extracted groundwater to a storm sewer on the site at 3333 Scott Boulevard in the City of Santa Clara and which is tributary to Calabazas Creek, as provided herein.
5. The maximum combined pumping rate for onsite extraction wells shall not exceed the following schedule without prior written approval of the Board's Executive Officer: one active extraction well, ten gallons per minute (10 gpm); two or more active extraction wells, 15 gpm.
6. In addition to any other report required by this Order, the discharger shall submit on an annual basis for the term of the permit a report, "Annual Report - Disposal of Extracted Groundwater". This report shall be submitted by February 1 of the current year, for the preceding calendar year, and shall address the concerns expressed by this Regional Board's Resolution No. 88-160, Regional Board Position on the Disposal of Extracted Groundwater From Groundwater Cleanup Projects, and provide an update of the discharger's efforts to reuse or reclaim all or part of the extracted groundwater. This report may be included as part of the annual report, as stated in Finding 18.
7. Any noncompliance with a requirement of this Order shall be reported as stated in Section C.10 of the "Standard Provisions, Reporting Requirements and Definitions" referred to in Provision 3.
8. This Order shall serve as a National Pollutant Discharge Elimination System Permit pursuant to Section 402 of the

Clean Water Act or amendments thereto, and shall become effective ten days after the date of its adoption provided the Regional Administrator, Environmental Protection Agency, has no objection. If the Regional Administrator objects to its issuance, the permit shall not become effective until such objection is withdrawn.

9. This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, nor protect the discharger from his liability under Federal, State or local laws, nor create a vested right for the discharger to continue the waste discharge.
10. Provisions of these waste discharge requirements are severable. If any provision of these requirements is found to be invalid, the remainder of these requirements shall not be affected.
11. Order No. 86-85 is hereby rescinded.
12. This Order expires November 20, 1996. The discharger must file a report of waste discharge in accordance with Title 23, Chapter 3, Subchapter 9 of the California Administrative Code not later than 180 days in advance of such expiration date as application for issuance of new waste discharge requirements.

I, Steven R. Ritchie, Executive Officer, do hereby certify that the foregoing is a full, true and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on November 20, 1991.

  
STEVEN R. RITCHIE  
Executive Officer

Attachments

Standard Provisions, Reporting  
Requirements and Definitions,  
December 1986

Self-Monitoring Program



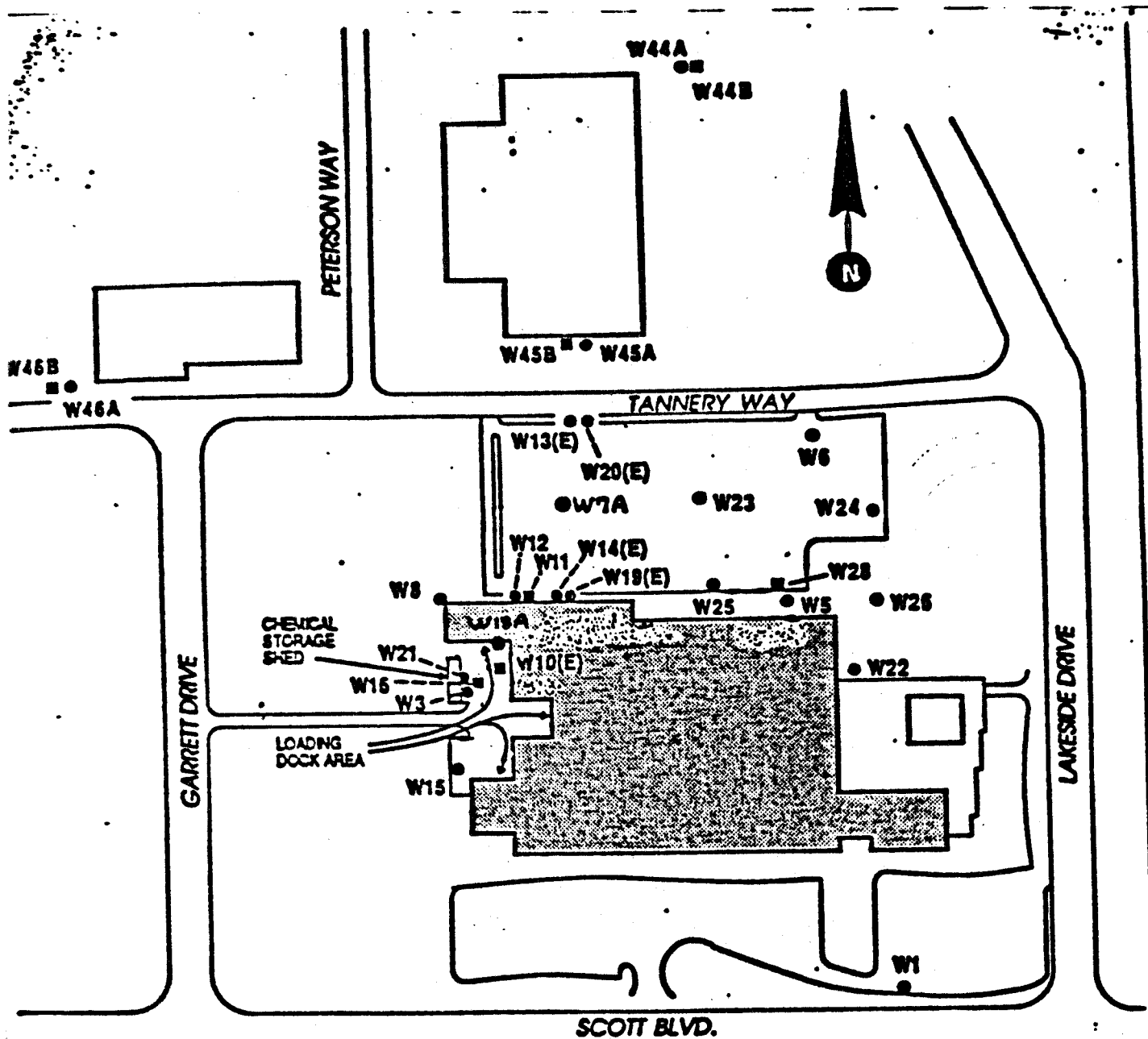
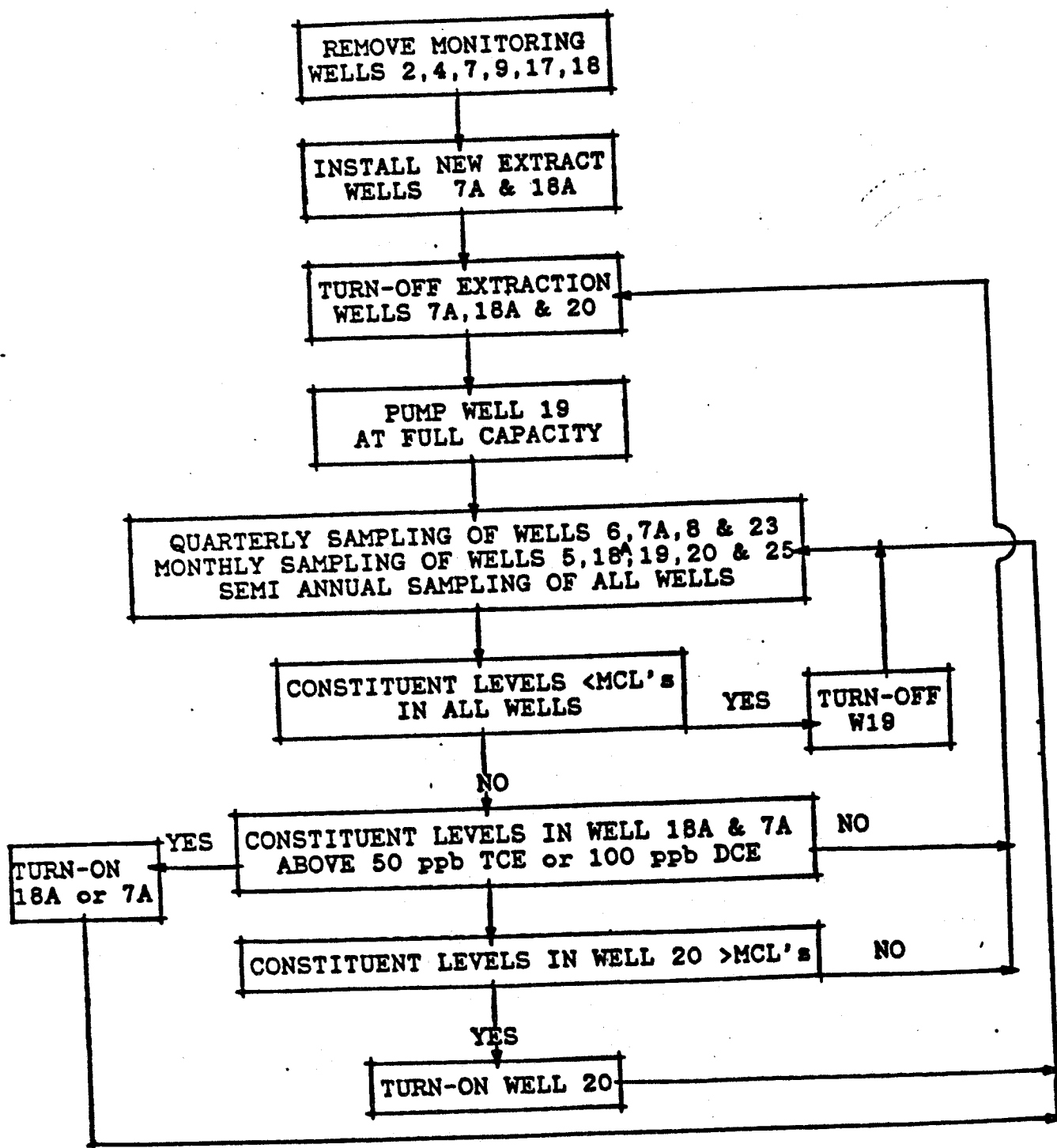


Figure 1 : SITE MAP SHOWING MONITORING WELL LOCATIONS

No. 1085

**LEVINE • FRICKE**  
CONSULTING ENGINEERS AND HYDROGEOLOGISTS

## MPI GROUNDWATER EXTRACTION AND MONITORING PLAN



CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

SEAGATE TECHNOLOGY, INC.  
3333 SCOTT BOULEVARD  
CITY OF SANTA CLARA  
SANTA CLARA COUNTY

NPDES NO. CA0029025

ORDER NO. 91-159

CONSISTS OF

PART A, dated December 1986  
(modified January 1987)

and

PART B

## PART B

### I. DESCRIPTION OF SAMPLING STATIONS

#### A. INFLUENT

<u>Station</u>	<u>Description</u>
I-1	At a point in the groundwater extraction/treatment system immediately prior to any treatment including the addition of acid to prevent scaling.

#### B. EFFLUENT

<u>Station</u>	<u>Description</u>
E-1	At a point in the groundwater extraction/treatment system immediately following all groundwater treatment.

#### C. RECEIVING WATERS

<u>Station</u>	<u>Description</u>
C-1	At a point in storm drain at least 100 yards but not more than 200 yards downstream from Station E-1.

### II. SCHEDULE OF SAMPLING AND ANALYSIS

- A. The schedule of sampling and analysis shall be that as shown in Table I attached.

### III. MODIFICATION OF PART A, DATED JANUARY 1987

All items of Self-Monitoring Program Part a, dated December 1986 and as modified January 1987, and as supplemented herein, shall be complied with:

- A. Additions to Part A: "In the twice annual open-scan for effluent samples, all chromatic peaks for purgeable halocarbons and/or volatile organics shall be identified and quantified. If previously unquantified peaks are identified in any sample, these peaks shall be confirmed within four weeks or at the next sampling event based on analyses of samples using chemical standards necessary to achieve proper identification and quantification.

"Results from each required analysis and observation, including any confirmatory analysis, shall be submitted as laboratory originated data summary sheets in the self-monitoring reports. Results shall also be submitted for any additional analyses performed by the discharger at the specific request of the Board for parameters for which effluent limits have been established and provided to the discharger by the Board, and shall be submitted with the report for the month in which the analysis is made."

B. Modifications to Part A: for the following, the discharger shall comply with the Sections as changed and reported herein.

1. Section D.2.a. is changed to read:

Samples of effluent and receiving waters shall be collected at times coincident with influent sampling unless otherwise stipulated. The Regional Board or Executive Officer may approve an alternative sampling plan if it is demonstrated that expected operating conditions warrant a deviation from the standard sampling plan.

2. Section D.2.d. is changed to read:

If two consecutive samples of any one constituent or parameter monitored on a weekly or monthly basis in a 30-day period exceed the effluent limit or are otherwise out of compliance, or if the required sampling frequency is once per month or less (quarterly, annually or other) and the sample or parameter exceeds the limit or is otherwise out of compliance, the discharger shall implement procedure(s) acceptable to or approved by the Board Executive Officer, on a case by case basis.

3. Section D.2.e. is changed to read:

If any instantaneous maximum limit is exceeded, the discharge shall terminate immediately upon discovery of the excess, and shall not resume until the cause of the violation is found and corrected and/or the Board Executive Officer authorizes resumption of the discharge.

4. In Section F.1, the phrase "(at the waste treatment plant)" is changed to read, "(at the discharger's facility at 3333 Scott Boulevard in Santa Clara)".

5. Information requested in Section G.4.e. shall be prepared in a format similar to EPA form 3320-1 and submitted only to the Regional Board.
6. The Annual Report required in Section G.5 shall be submitted in place of the end of the year monthly report.
7. The GC/MS scan required twice annually at E-1 shall be substituted for the monthly organic chemical analysis at this sampling station during the months when the GC/MS scan samples are collected.

IV. MISCELLANEOUS REPORTING

- A. If any chemicals or additives are proposed too be used in the operation and/or maintenance of the extraction/treatment system, the discharger shall obtain the Board's concurrence prior to use. The details concerning such approved use shall be reported in the next periodic report submitted to the Board.

I, Steven R. Ritchie, Executive Officer, hereby certify that the foregoing Self-Monitoring Program:

1. Has been developed in accordance with the procedures set forth in this Regional Board's Resolution No. 73-16 in order to obtain data and document compliance with waste discharge requirements established in Regional Board Order No. 91-159.
2. Was adopted by the Board on November 20, 1991.
3. May be reviewed at any time subsequent to the effective date upon written notice from the Executive Officer or request from the discharger, and revisions will be ordered by the Executive Officer or Regional Board.

  
STEVEN R. RITCHIE  
Executive Officer

Attachment: Table I

**TABLE I**  
**SCHEDULE FOR SAMPLING, MEASUREMENTS, AND ANALYSIS**

Sampling Station	I-1	E-1	C-1
Type of Sample	G	G	G
Flow rate (GPD)	D	D	
Total suspended matter (mg/l & kg/day)		Q	
Fish Tox'y 96-hr. % Surv'l in undiluted waste		Y	
Ammonia Nitrogen (mg/l & kg/day) {1}			
pH (units)	M	M	
Dissolved Oxygen (mg/l & Saturation)		2/Y	
Temperature (Centigrade)		Q	
Metals (Standard Methods For Priority Pollutants)		Y	
Identifiable Organic Chemicals {2}	M	M	2/Y
GC/MS Open Scan (EPA Method 624/625)		2/Y	
Quantity Organic Chemicals Removed, in Pounds {3}		M	

**LEGEND FOR TABLE I**

**Type of Station**

I = intake and/or water supply station  
E = waste effluent station  
C = receiving water station

**Type of Sample**

G = grab sample

Frequency of Sampling

D = once each day

M = once each month

Y = once each year

2/Y = once each in March and September

Q = quarterly, once each in March, June, September, and December

REMARKS FOR TABLE I

{1} Total ammonia nitrogen shall be analyzed and un-ionized ammonia calculated whenever fish bioassay results fail to meet the specified percent survival.

{2} Identifiable Organic Chemicals refers to volatile organic compounds and associated organic constituents and compounds, whether identified as chlorinated, halogenated, or otherwise, and include but are not limited to the following:

chloroform

1,1-dichloroethane

1,1-dichloroethylene

cis-1,2-dichloroethylene

trans-1,2-dichloroethylene

methylene chloride

tetrachloroethylene

1,1,1-trichloroethane

trichloroethylene

1,1,2-trichlorotrifluoroethane

trichlorofluoromethane

vinyl chloride

1,2-dichloroethane

carbon tetrachloride

Any other organic constituents identified during or as a result of required analyses, and concentrations detected, shall be reported.

Concentrations detected may be reported in micrograms per liter (ug/l) or parts per billion (ppb), or in other commonly acceptable units of measurement. The units of measurement will be clearly provided with the analysis. Detection limits used in the analyses shall be adequate for indicating compliance with permit requirements.

{3} The pounds of chemicals removed by the treatment used will be reported on a monthly basis; cumulative totals will be included in quarterly and annual reports.